**张传林**

**基本信息**

**姓名：张传林**

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**个人简介**

张传林，博士，教授， 主要研究方向为非线性控制理论及其在分布式发电系统、智能自主系统等领域的应用。在国际上首次提出了复杂非线性系统的一类非递归控制理论方法，并成功应用在柔性机械臂以及交/直流微电网等多个典型工程对象中，创新成果得到了国际同行的普遍认可与正面引用。目前发表SCI检索期刊论文70余篇，其中SCI一、二区论文40余篇，IEEE Transactions系列期刊论文30余篇，先后有4篇论文入选ESI高被引目录。主持国家自然科学基金青年基金与面上项目、上海市青年科技启明星、扬帆计划、晨光计划、上海市自然科学基金等多项科研项目。现任国家级一流本科课程《自动控制原理》负责人，IEEE PES 智能电网与新技术（中国）智慧物联与控制技术分委会常务理事，上海市自动化学会理事，上海市电子电器协会理事暨学术委员会副主任，IEEE高级会员，中国自动化学会青年工作委员会委员等。

**教育工作背景**

04/2022-至今 上海电力大学 计算机科学与技术学院 常务副院长

02/2019-至今 上海电力大学 自动化工程学院 教授

09/2017-01/2019 上海电力大学 自动化工程学院 副教授

02/2017-02/2018 新加坡国立大学先进机器人中心 访问学者

02/2016-02/2017 新加坡南洋理工大学能源研究所 访问学者

08/2014-09/2017 上海电力大学 自动化工程学院 讲师

09/2008- 03/2014 东南大学 自动化学院 硕博连读 工学博士

09/2011-09/2012 美国德州大学圣安东尼奥分校 电气工程学院 联合培养博士生

09/2004-07/2008 东南大学 数学系 理学学士

**研究方向**

理论方向: 非线性控制理论，智能控制理论。

应用方向: 直流微电网先进控制，智能电力机器人，信息物理系统等

**主要科研项目**

1. 01/2023-12/2027，国家自然科学基金重点项目：区域能源互联网的分布式协同控制与智能决策，NO.62233006, 300万元，排名第二.
2. 01/2022-12/2025，国家自然科学基金面上项目：基于齐次系统理论的非递归控制方法与应用研究，NO. 62173221，57万元，主持
3. 01/2019-12/2022, 上海市东方学者特聘教授计划，先进非线性理论及应用，100万元，主持
4. 06/2020-05/2023，上海市科委青年科技启明星计划：特征模型条件下的直流微电网控制与优化研究，NO.20QA1404000，40万元，主持
5. 01/2016—12/2018，国家自然科学基金青年基金：不确定非线性系统的齐次控制理论及应用研究，NO.61503236, 24万元，主持
6. 06/2019-05/2022, 上海市自然科学基金：趋于大信号稳定性的直流微电网非线性控制技术研究，NO.19ZR1420500，20万元，主持
7. 01/2015—12/2017，上海市科委青年科技英才扬帆计划：面向新能源的DC-DC变换器高效控制算法研究，NO.15YF1404500，10万元，主持
8. 01/2016—12/2018，上海市教育委员会晨光计划：面向电力电子变换器的主动抗干扰控制研究，NO.15CG56，6万元，主持

**相关成果**

1. Dong X, **Zhang C**\*, Yang T, Yang J. Nonsmooth dynamic tracking control for nonlinear systems with mismatched disturbances: Algorithm and practice. **IEEE Transactions on Industrial Electronics**, DOI=10.1109/TIE.2022.3181367. (**SCI一区，IF=8.162)**
2. Lang J, **Zhang C**\*, Xia F, Wang G, Wang X. Self-disciplined nonsmooth coordination control for battery energy storage system in autonomous DC microgrids towards large-signal stability. **IEEE Transactions on Smart Grid**, DOI=10.1109/TSG.2022.3206336. (**SCI一区，IF=10.275)**
3. Cui C, Yang T, Dai Y, **Zhang C**\*, Xu Q. Implementation of transferring reinforcement learning for DC-DC buck converter control via duty ratio mapping, **IEEE Transactions on Industrial Electronics**, DOI=10.1109/TIE.2022.3192676. (**SCI一区，IF=8.162)**
4. Wang X, Dong X, Niu X, **Zhang C**\*, Cui C, Huang J, Lin P.Towards balancing dynamic performance and system stability for DC microgrids: A new decentralized adaptive control strategy, **IEEE Transactions on Smart Grid**, 2022, 13(5): 3439-3451. (**SCI一区，IF=10.275)**
5. Zhang M, Xu Q, **Zhang C**\*, Nordstrom L, Blaabjerg F. Decentralized coordination and stabilization of hybrid energy storage systems in DC microgrids, **IEEE Transactions on Smart Grid**, 2022, 13(3): 1751-1761. (**SCI一区，IF=10.275)**
6. Cui C, Yan N, Huangfu B, Yang T, **Zhang C**\*. Voltage regulation of DC-DC buck converters feeding CPLs via deep reinforcement learning, **IEEE Transactions on Circuits and Systems II: Express Briefs**, 2022, 69(3):1777-1781. (**SCI二区，IF=3.691)**
7. 冯小, **张传林**\*, 崔承刚, 郭方洪. 基于Stackelberg博弈的孤岛式光储充电站调度优化, **电网技术**, doi=10.13335/j.1000-3673.pst.2021.1916, 2022.
8. Lin P, Jiang W, Wang J, **Zhang C**\*, Wang P. Toward Large signal stabilization of floating dual boost converter powered DC microgrids feeding constant power loads, **IEEE Journal of Selecting and Emerging Topics in Power Electronics**, 2021, 9(1): 2168-6777. (**SCI一区，IF=5.462)**
9. Lin P, Jiang W, Tu P, Jin C, **Zhang C**\*, Wang P. Dynamic power allocation for hybrid energy storage system with self-disciplined large signal stability in renewable DC power systems. **IEEE Transactions on Sustainable Energy**, 2020, 11(4):2345-2355. **(SCI一区，IF=8.310).**
10. Xu Q, Yan Y, **Zhang C\***, Dragicevic T, Blaabjerg F. An offset-free composite model predictive control strategy for DC/DC buck converter feeding constant power loads. **IEEE Transactions on Power Electronics,** 2020, 35(5): 5331-5342. **(SCI一区，IF=5.967).**
11. **Zhang C**, Wen C, Wang L\*. Nonsmooth decentralized stabilization for interconnected systems subject to strongly coupled uncertain interactions. **IEEE Transactions on Systems, Man and Cybernetics: Systems**. 2020，50(7): 2685-2692. (**SCI一区，IF=11.471**).
12. **Zhang C**, Yang J\*, Wen C, Wang L, Li, S. Realization of exact tracking control for nonlinear systems via a non-recursive dynamic design. **IEEE Transactions on Systems, Man and Cybernetics: Systems**. 2020, 50(2):577-589. **(SCI一区，IF=11.471)**.
13. **Zhang C**, Yang J\*, Fridman L, Yan Y, Li S. Semi-global finite-time trajectory tracking realization for disturbed nonlinear systems via higher-order sliding modes. **IEEE Transactions on Automatic Control**, 2020，60(5): 2185-2191. **(SCI一区，IF=6.549).**
14. **Zhang C,** Wang X, Lin P, Peter X Liu\*, Yan Y, Yang J. Finite-time feedforward decoupling and precise decentralized control for DC microgrids towards large signal stability. **IEEE Transactions on Smart Grid,** 2020, 11(1): 391-402. **(SCI一区，IF=10.275).**
15. Xu Q, Xu Y, **Zhang C**\*, Wang P. A droop-based autonomous controller for decentralized power sharing in DC microgrid considering large signal stability. **IEEE Transactions on Industrial Informatics**, 2020, 16(3): 1483-1494. **(SCI一区，IF=11.648**).
16. Lin P, **Zhang C**\*, Wang P. On autonomous large signal stabilization for islanded multi-bus DC microgrids: A uniform nonsmooth control scheme, **IEEE Transactions on Industrial Electronics**, 2020, 67(6): 4600-4612. **(SCI一区，IF=8.162**).
17. Xu Q, **Zhang C**\*, Wen C, Wang P. A novel composite nonlinear controller for stabilization of constant power load in DC microgrid. **IEEE Transactions on Smart Grid**, 2019, 10(1):752-761. (**SCI一区，IF=10.275，被引200次，ESI高被引论文**).
18. Lin P, **Zhang C**\*, Wang P. Xiao J. A decentralized composite controller for unified voltage control with global system large-signal stability in DC microgrids. **IEEE Transactions on Smart Grid**. 2019, 10(5): 5075-5091. (**SCI一区，IF=10.275**).
19. **Zhang C**, Yan Y, Yu H\*. Global dynamic non-recursive realization of decentralized nonsmooth exact tracking for large-scale interconnected nonlinear systems. **IEEE Transactions on Cybernetics**, 2019, 49(9): 3521-3531. (**SCI一区，IF=19.118** ).
20. **Zhang C**, Yan Y, Wen C, Yang J, Yu H\*. A nonsmooth composite control design framework for nonlinear systems with mismatched disturbances: Algorithms and experimental Tests. **IEEE Transactions on Industrial Electronics**, 2018, 65(11): 8828-8839. **(SCI一区，IF=8.162**).
21. **Zhang C**, Yan Y, Ashwin Narayan, Yu H\*. Practically oriented finite-time control design and implementation: Application to series elastic actuator. **IEEE Transactions on Industrial Electronics**, 2018, 65(5):4166-4176. **(SCI一区，IF=8.162**).
22. **Zhang C,** Wang J, Li S\*, Wu B, Qian C. Robust control for PWM-based DC–DC buck power converters with uncertainty via sampled-data output feedback. **IEEE Transactions on Power Electronics,** 2015, 30(1): 504-515**. (SCI一区，IF=5.967，被引187次).**
23. Huangfu B, Cui C\*, **Zhang C**, Xu L. Learning-Based Optimal Large-Signal Stabilization for DC/DC Boost Converters feeding CPLs via Deep Reinforcement Learning. **IEEE Journal of Selecting and Emerging Topics in Power Electronics**, DOI=10.1109/JESTPE.2022.3189078. (**SCI一区，IF=5.462)**
24. Lin P, **Zhang C**, Zhang X\*, Herbert Ho, Yang Y, Blaabjerg F. Finite-Time Large Signal Stabilization for High Power DC Microgrids with Exact Offsetting of Destabilizing Effects. **IEEE Transactions on Industrial Electronics**, 2021, 68(5):4014-4026. **(SCI一区，IF=8.162**).
25. Xu X, Liu Q, **Zhang C**, Zeng Z\*. Prescribed performance controller design for DC converter system with constant power loads in DC microgrid, **IEEE Transactions on Systems, Man and Cybernetics: Systems**. 2020, 50(11):4339-4348. **(SCI一区，IF=11.471)**.
26. Xu Q, Jiang W, Blaabjerg F, **Zhang C**, Zhang X\*, Fernando T. Backstepping Control for Large Signal Stability of High Boost Ratio Interleaved Interfaced DC Microgrids with Constant Power Loads. **IEEE Transactions on Power Electronics**, 2020, 35(5): 5397-5407. **(SCI一区，IF=5.967).**
27. Xu Q, **Zhang C**, Xu Z\*, Wang P. A Composite Finite-Time Controller for Decentralized Power Sharing and Stabilization of Hybrid Fuel Cell/Supercapacitor System with Constant Power Load, **IEEE Transactions on Industrial Electronics**, 2020, 68(2): 1388-1400. **(SCI一区，IF=8.162**).
28. Yan Y, **Zhang C**, Yang J, Liu C, Li S\*. Disturbance Rejection for Nonlinear Uncertain Systems with Output Measurement Errors: Application to a Helicopter Model. **IEEE Transactions on Industrial Informatics**, 2020, 16(5): 3133-3144. **(SCI一区，IF=11.648**).
29. Lin P, Wang P\*, Jin C, Xiao J, Li X, Guo F, **Zhang C**. A distributed power management strategy for multi-paralleled bidirectional interlinking converters in hybrid AC/DC microgrids. **IEEE Transactions on Smart Grid**. 2019, 10(5): 5696-5711. (**SCI一区，IF=10.275**).
30. Li T, Yang J\*, Li S, Wen C, **Zhang C**. Global adaptive finite-time stabilization of uncertain time-varying p-normal nonlinear systems without homogeneous growth nonlinearity restriction. **IEEE Transactions on Automatic Control**, 2019, 64(11):4637-4644. **(SCI一区，IF=6.549).**
31. Yan Y, **Zhang C**, Ashwin Narayan, Yang J, Li S, Yu H\*. Generalized Dynamic Predictive Control for Non-Parametric Uncertain Systems with Application to Series Elastic Actuators. **IEEE Transactions on Industrial Informatics**, 2018,14(11): 4829-4840. **(SCI一区，IF=11.648**).
32. Yan Y, Yang J, Sun Z, **Zhang C**, Li S\*, Yu H. Robust Speed Regulation for PMSM Servo System with Multiple Sources of Disturbances via An Augmented Disturbance Observer. **IEEE/ASME Transactions on Mechatronics**, 2018, 23(2):769-780. **(SCI一区，IF=5.867**).
33. Wang J, **Zhang C**, Li S\*, Li Q, Yang J. Finite-time output feedback control for PWM-based DC-DC buck power converters of current sensor-less mode. **IEEE Transactions on Control Systems Technology**, 2017, 25(4): 1359-1371. **(SCI一区，IF=5.418**).

**招生要求**

1. 欢迎具有下列学术背景（之一）的学生加入：数学、控制科学与工程、电气工程等背景；

2. 具有较强的英文书写和表达能力，较好的数学理论基础和编程经验；发表过本专业期刊论文的优先；